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Measuring the New Indices of Religious Orientation at the Cathedral Carol Service: internal consistency and reliability among a distinctively wide ranging sample

Abstract

The New Indices of Religious Orientation (NIRO) proposed and tested by Francis (2007) have been found in later studies to satisfy the requirements for internal reliability among samples where there are comparatively high levels of religious activity, and usually of predominantly older adults. The present study takes a sample of 393 individuals who attended Christmas Carol Services in Worcester in 2009. The sample was found to contain both a majority with quite low levels of churchgoing frequency and a much higher proportion of younger adults than in other studies of churchgoers. All the indices achieved satisfactory alpha coefficients (intrinsic 0.91, extrinsic 0.73, quest 0.80) with the item-rest of test scores being above 0.28 in all cases. It is concluded that the NIRO indices are likely to be a useful tool for analysing religious orientation and motivation among samples with relatively low or wide-ranging levels of religious practice and with a wide age range. The “compartmentalisation” subsection of the extrinsic scale is identified as perhaps being considered for some refinement.

Introduction

Religious Orientation

The characterisations of intrinsic and extrinsic religious orientation set out by Allport and Ross (1967) sought to distinguish between those for whom religious faith respectively is an end in itself or the means to achieve other objectives. Batson and Ventis (1982) extended the model by proposing a third orientation, namely “quest” to describe individuals for whom religion is an ongoing journey of discovery and question. Religious orientation has been seen to have significant associations with such issues as prejudice (see for example Batson, Schoenrade and Ventis, 1993) and fundamentalism (see for example Williamson, Hood, Ahmad, Sadiq and Hill, 2010). Francis (2007) gives a substantial list of some 39 examples of issues that have been studied in relation to religious orientation, from (alphabetically) academic dishonesty to universal compassion.

The New Indices of Religious Orientation

Various methods of operationalising religious orientation have been proposed and adopted (see for example Francis, Lewis and Robbins, 2010). Francis (2007) offers a critique of some of these scales. Some of the items used in the tests he describes as unclear, verbose, overly complex or confused as to what they are actually measuring. Furthermore, items used in tests of religious orientation are often inappropriate when applied to an individual who is not very religious. This leads him to set out the *New Indices of Religious Orientation (NIRO)*, as a 27-item test with 9 statements offered for each of the three indices. The indices were tested on a population of 517 undergraduate students in Wales of whom only 27% attended church at least once a month with about another half of the sample going at least annually. The alpha coefficients for the indices were found to be well above the normal threshold of .65 proposed by De Vellis (2003) for internal reliability.

The NIRO indices have since been found to be reliable among a range of churchgoing populations such as older Methodists in Leeds (Francis, Jewell and Robbins, 2010), weekly church attenders in England and Wales (Ross and Francis, 2010) and a single Anglican congregation in southern England (Francis, Robbins and Murray, 2010). Williams (2010) looked at a sample of 432 worshippers at Anglican cathedrals in England and Wales, where again the vast majority described themselves as regular members of the congregation, and found alpha coefficients of between 0.75 and 0.79 for all three indices.

These findings leave a significant question, whether the indices remain reliable when applied to a more heterogeneous population. In particular whilst the original Francis sample contained a wide range of churchgoing frequency it was restricted to the narrow age range of a university undergraduate population whilst the later studies have focussed on regular churchgoing, and usually much older, groups. Would the same reliability be present among a population that included a wide disparity both of age and of church attendance?

Method

Instrument and procedure

Some 393 adults attending the *Service of Nine Lessons and Carols* on one of two December nights in Worcester Cathedral in 2009 were invited to complete a questionnaire including the NIRO scales. They also provided demographic information: gender and age (measured in decades). A further question asked them to indicate their frequency of church attendance on a six point scale from “never” to “weekly or more often”. The NIRO scales were assessed using the full 27-item test of Francis, with respondents asked to choose between “disagree strongly” = 1, “disagree” = 2, “not certain” = 3, “agree” = 4 and “agree strongly” = 5 for each of the statements. The scores for the individual statements were then added to create a single value for each individual for each index. The survey forms were anonymous and confidential.

Sample

The sample included 157 men and 219 women (17 did not respond). The age profile showed a distinct pattern when compared with those usually found for regular churchgoers (see for example Francis, Astley and Robbins, 2005): 27% of respondents were under 40 (with 5% aged 19 or below, 13% in their 20s, 9% in their 30s). While 13% of those at the Carol Service were in their 40s, 21% were in their 50s, 31% in their 60s and just 8% were aged 70 or above. There was also a very wide spread of reported attendance at church with 20% attending weekly or more, 12% nearly weekly, 9% at least monthly, 14% at least 6 times per year, 37% at least annually. A further 9% claimed never to attend church. The sample clearly offers a range in both age and frequency of churchgoing that can test the reliability of the NIRO scales beyond that provided by earlier studies.

Results and Discussion

Properties of the whole scales

In order to assess the reliability of the NIRO instrument with respect to the current sample the scale properties of the three scales were calculated.

Table 1 shows that the scales have good properties. In each case the mean is not far from the figure of 27.0 which would be the expected result for an entirely random set of answers to the nine questions. The standard deviations vary between 5.4 and 8.1; these are comparable to those observed by Francis (2007). The Cronbach alpha scores for all three scales proved to be comfortably in excess of the recommended threshold of .65 (De Vellis, 2003).

Insert table 1 about here

Furthermore the pairwise correlation figures for the three variables were between .26 and .38; each with significance at the $p < .001$ level. This shows that all three pairs have a positive correlation, which would be expected as scores on all three indices would be likely to increase with levels of religious involvement and commitment. It also shows however that the correlations are sufficiently low to indicate that quite distinct forms of religious orientation are being measured by the three indices.

Individual items of the scales

The item rest of test figures which demonstrate how each item in a particular scale co-varies with the sum of the other eight items were also calculated and the results are set out in the first column of table 2.

Insert table 2 about here

The lowest score achieved was .28 for the first question on the intrinsic scale. All but two scores were above the normal threshold of .30. This suggests that the indices are reliable for scales of this length. Table 2 also gives the comparative item-rest of test correlations for each of the 27 statements as reported by Francis (2007). It can be seen that in most cases the correlations are lower in the present study, which may well reflect the more heterogeneous population being studied.

It is notable that the three lowest correlations were for the three items under Francis's heading of "compartmentalisation" within the extrinsic index. For the 2007 study these items had the lowest, next lowest and sixth lowest correlations. Examining the wording of these three statements, as set out in table 2, all of them might be seen as making a presumption of religious belief to a greater extent than the remaining statements in the extrinsic scale. Whilst many of the statements in the NIRO scales may be easier to answer for a person with a high degree of religious involvement, it may be that these more than most disproportionately prove difficult to answer for a person with relatively low engagement. This raises the question as to whether it would be possible to reword these statements modestly in a way that still constituted a measure of compartmentalisation but was more accessible to occasional churchgoers. Conversely, it must be stressed that the indices have remained above the normal thresholds for reliability and the value of using the same instrument in a wide variety of studies may be greater than that of refining it further.

Conclusion

Neither the lower level and wider range of churchgoing seen in the present sample, by comparison with earlier studies using the NIRO scales, nor the wide distribution of ages among the participants has damaged the reliability of the instrument. The NIRO scales can be commended for use among similarly wide-ranging populations with the expectation that they will prove reliable in those cases.

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Table 1 Properties of the three scales

	scale properties			pairwise correlations	
	mean	sd	alpha	quest	extrinsic
intrinsic orientation	27.5	8.1	.91	.38***	.26***
extrinsic orientation	25.0	5.4	.73	.35***	
quest orientation	28.7	5.7	.80		

*** = $p < .001$ **Table 2: New Indices of Religious Orientation (NIRO) values and reliability**

	Item rest of test		% yes n/c no		
	Here	Francis			
Extrinsic orientation					
<i>Compartmentalisation</i>					
While I believe in my religion, there are more important things in my life	.28	.35	33	37	31
While I am a religious person, I do not let religion influence my daily life	.29	.45	24	27	49
Occasionally I compromise my religious beliefs to protect my social and economic well-being	.30	.53	17	31	52
<i>Social support</i>					
One reason for me going to church is that it helps to establish me in the Community	.44	.56	15	27	58
A key reason for my interest in church is that it is a pleasant social activity	.32	.47	26	29	46
I go to church because it helps me to feel at home in my neighbourhood	.48	.62	19	27	55
<i>Personal support</i>					
One reason for me praying is that it helps me to gain relief and protection	.51	.69	38	32	29
What prayer offers me most is comfort when sorrow or misfortune strike	.49	.63	53	25	22
I pray chiefly because it makes me feel better	.53	.69	34	28	38
Intrinsic orientation					
<i>Integration</i>					
My religious beliefs really shape my whole approach to life	.78	.73	47	26	27
I try hard to carry my religion over into all my other dealings in life	.70	.69	55	27	18
My religious beliefs really shape the way I treat other people	.64	.71	59	25	16
<i>Public religion</i>					
I allow almost nothing to prevent me from going to church on Sundays	.62	.63	17	15	68
I go to church because it helps me to feel close to God	.69	.64	50	23	27
The church is most important to me as a place to share fellowship with other Christians	.67	.71	40	29	31
<i>Personal religion</i>					
I pray at home because it helps me to be aware of God's presence	.78	.79	42	23	35
I often read books about prayer and the spiritual life	.54	.54	20	18	62
I pray chiefly because it deepens my relationship with God	.83	.82	38	31	31
Quest orientation					
<i>Existentialism</i>					
I was driven to ask religious questions by a growing awareness of the tensions in my world	.49	.60	29	28	43
My life experiences have led me to rethink my religious beliefs	.50	.62	49	26	25
Religion only became very important for me when I began to ask questions about the meaning of my life	.37	.55	18	29	53
<i>Self-criticism</i>					
I value my religious doubts and uncertainties	.49	.60	49	34	17
For me doubting is an important part of what it means to be religious	.54	.58	54	31	15
Questions are more important to my religious faith than are answers	.46	.52	29	45	26

Openness to change

As I grow and change, I expect my religion to grow and change as well	.48	.58	58	26	16
I am constantly questioning my religious beliefs	.56	.57	47	24	29
There are many religious issues on which my views are still changing	.54	.50	59	24	17
